

**Tucson Electric Power | UNS Electric, Inc.**

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March 15, 2022

Docket Control  
Arizona Corporation Commission  
1200 West Washington Street  
Phoenix, AZ 85007

RE: Notice of Filing - Tucson Electric Power Company's and UNS Electric, Inc.'s Comprehensive Transportation Electrification Plan Semi-Annual Progress Report, Decision No. 78383, Docket No. E-00000A-21-0104

Pursuant to the above specified item, Tucson Electric Power and UNS Electric, Inc. hereby file their Comprehensive Transportation Electrification Plan Semi-Annual Progress Report.

If you have any questions about this filing, please contact me at (520) 918-8359.

Sincerely,

/s/Andrea Jacobo

Andrea Jacobo  
Regulatory Services

**Tucson Electric Power and UNS Electric, Inc. Statewide Transportation Electrification Plan**

**March 15, 2022, Semi-Annual Progress Report**

**Pursuant to Decision No. 78383**

**Covering reporting period of Jan 1st, 2021 to December 31, 2021**

**INTRODUCTION**

Decision No. 77289 (July 19, 2019, Docket No. E-00000A-18-0284) approved an Electric Vehicle Policy Implementation Plan which required Public Service Corporations ("PSCs") to coordinate and jointly develop, with stakeholder input, a joint, long-term, comprehensive transportation electrification plan for Arizona, to be filed by December 31, 2019, for Commission review and approval. On December 27, 2019, Tucson Electric Power Company ("TEP"), UNS Electric, Inc. ("UNSE") and Arizona Public Service Company ("APS") filed with the Arizona Corporation Commission ("Commission") Phase I of a joint statewide transportation electrification plan ("STEP") to comply with Decision No. 77289. The Commission subsequently approved the STEP in Decision No. 78383 (December 28, 2021) with the following reporting requirements:

- March 15 (Annually starting in 2022): PSC Semi-Annual Progress Report
- April 28, 2022: Budget due for STEP programs as approved in Decision No. 77289
- June 1 (every 3 years starting in 2022): New 3-year PSC Implementation Plan
- September 15 (Annually starting in 2022): PSC Semi-Annual Progress Report

In respect to the March 15 and September 15 Semi-Annual Reports, Decision No. 78383 states the following:

*Tucson Electric Power Company and Arizona Public Service Company shall file semi-annual progress reports with the Commission detailing the status and implementation of the plan, by March 15 and September 15 of each year. At a minimum, as applicable, these reports shall provide a commensurate level of detail as provided by each utility in their semi-annual and annual demand-side management reports and shall incorporate any program plan updates that the utilities intend to institute. In these reports, Tucson Electric Power Company, UNS Electric, Inc., and Arizona Public Service Company shall also make all reasonable efforts to report on their progress relative to the Participation, Environmental, and Economic metrics established in the plan.*

Therefore, this report is for the purpose of complying with TEP's and UNSE's Semi-Annual Progress Report requirement due March 15.

## **TEP Semi-Annual Progress Report**

### **1. PROGRAM DESCRIPTIONS**

#### **Smart City EV Buildout (EV Commercial Program)**

TEP's Smart City EV Charging Program is available to commercial businesses, multi-family complexes and non-profit customers that purchase and install EV charging ports at their location. To qualify for the TEP rebate, the commercial customer must:

- Purchase and install a minimum of two (but up to six) Level 2 or DC-fast charging ports at their location. Projects that involve the installation of six or more ports will be evaluated on an individual basis and incentives may vary.
- Sign a Site Host Agreement with a three-year term.
- Take service under one of TEP's Time-of-Use pricing plans.

#### **Project Costs Eligible for Incentives**

- EV charging station and related equipment
- Electrical service upgrades required for the installation
- Design and engineering services
- Construction and installation (materials and labor)
- Service, warranty and O&M agreements

Through a competitive RFP process, TEP has selected CLEAResult as the implementation contractor for this program.

#### **Smart Home EV Buildout (EV Existing Home Program)**

TEP's Smart Home EV Charging Program is available to residential customers that purchase and install an EV charger at their home. To qualify for the TEP rebate, residents must:

- Be a current TEP customer
- Install a Level 2 or higher EVC in this calendar year
- Provide proof of purchase that includes the charger serial and model number
- Use a Time-of-Use (TOU) rate plan for a minimum of two years.

Net-metering customers are excluded from being required to use a TOU plan if they purchase a two-way communication EVC. Net metering customers with a one-way communication EVC must use a TOU plan.

#### **Residential EV Calculator**

The Residential EV Calculator is an online tool that allows residential customers to consider costs and potential savings of switching from an ICE vehicle to an electric vehicle. It provides customers with the ability to compare EV options and make informed decisions based on driving habits, customer inputted home electricity use, and available tax credits and incentives.

The online tool was developed by WattPlan.

### **Fleet Conversion Planning Tool**

The Fleet Conversion Planning Tool, developed in collaboration with West Monroe Partners, provides our account managers with a total cost of ownership calculator to assist TEP's fleet customers with their electrification plans. The tool provides an easily digestible snapshot of upfront costs, long-term savings, environmental benefits, and return on investment. This tool has been used to help some of our customers with the largest fleets in our service territory. TEP also used this tool for its own internal fleet.

### **New Home EV Readiness (EV Readiness – Discontinued as of December 31, 2021)**

The EV Readiness incentive aims to increase EV adoption among new homebuyers by working with builders to make new construction single-family homes "EV Ready" through pre-wiring for charging supply equipment. The program was discontinued as a result of local adoption of an amendment to the International Residential Code to require EV charging outlets in all new one- and two-family dwellings.

### **Employee EV Program**

The EV Employee Program was launched in June of 2021 for regular, unclassified and classified employees at UNSE and TEP. This program is shareholder funded. The program is designed to provide a monetary incentive for employees that have purchased an all-electric vehicle on or after January 31, 2020.

## **2. GOALS AND OBJECTIVES**

### **Smart City EV Buildout (EV Commercial Program)**

The EV Commercial Program, which officially launched in May of 2020, has a goal of activating 360 ports within TEP's service territory by the end of 2022. The program provides a business, multifamily, school or workplace with a rebate for eligible costs of up to \$4,500/Level 2 port and \$24,000/Level 3 (DCFC) port. Multi-family dwellings and non-profits have a slightly higher rebate for level 2 ports of up to \$6,000/L2 port. Projects located in disadvantaged communities as defined by the U.S. Census Bureau receive additional financial support. Rebates are provided to customers at project completion. See table below for use cases and rebate levels.

Charger Type	Site	Standard	Disadvantaged Community (DAC) Eligible Projects*
Level 2 (L2)	Workplace	\$4,500/port; up to 75% of project cost	\$6,000/port; up to 75% of project cost
Level 2 (L2)	Multi-family, Nonprofit	\$6,000/port; up to 85% of project cost	\$9,000/port; up to 85% of project cost
DC Fast Charger (DCFC)	All	\$24,000/port; up to 75% of project cost	\$40,000/port; up to 75% of project cost

*\*Includes projects located in U.S. Census tracts where average household incomes do not exceed 80% of the median Arizona household income AND where chargers are made available to the public during normal business hours. For a map of qualifying areas, visit <https://www.census.gov/>*

#### **Smart Home EV Buildout (EV Existing Home Program)**

TEP residential customers who purchase a Level 2 with one-way or two-way communications can claim a rebate of up to \$500, depending on the amperage of the EVC: \$200 for less than 30 amps, \$300 for 30 to 49 amps, \$500 for 50 or more amps. Rebates are issued as a credit on the customer's TEP account. A two-way communicating EVC allows the utility (or a third party) to connect to the EVC to manage charging and collect charging data to assist with grid optimization. The program has a goal of activating: 130 ports in 2022.

#### **Residential EV Calculator**

The Residential EV Calculator is an online tool intended to help customers make an informed EV adoption decision.

#### **Fleet Conversion Planning Tool**

The Fleet Conversion Planning Tool is intended to help fleet customers make an informed decision about fleet electrification

#### **New Home EV Readiness (Discontinued as of December 31, 2021)**

TEP offered a pre-wire incentive of \$100 per home to homebuilders. The initial program goal was set at 26 homes.

#### **Employee EV Program**

The program will run until 50 incentives have been processed.

### 3. LEVEL OF PARTICIPATION

#### **Smart City EV Buildout (EV Commercial Program)**

January 1, 2021 to December 31, 2021

	2021
Number of Projects Completed (# of ports)	Level 2: 32 DCFC: 0
Number of Contracted Projects (# of ports)	Level 2: 244 DCFC: 15
Number of Qualified Applications (# of ports)	Level 2: 333 DCFC: 62

\*Project completion timeframe is dependent on lead time for permitting, charging infrastructure order and customer decision cycle.

#### **Smart Home EV Buildout (EV Existing Home Program)**

January 1, 2021 to December 31, 2021

	2021
Number of Participants	153

#### **Residential EV Calculator**

January 1, 2021 to December 31, 2021

	2021
Unique Users	234

#### **Fleet Conversion Planning Tool**

January 1, 2021 to December 31, 2021

	2021
Customer Scenarios Analyzed	16

#### **New Home EV Readiness (Discontinued as of December 31, 2021)**

	2021
Number of homes completed	26

#### **Employee EV Program**

January 1, 2021 to December 31, 2021

	2021
Employee Participation	12

### 4. PROBLEMS ENCOUNTERED AND PROPOSED SOLUTIONS

#### **Smart City EV Buildout (EV Commercial Program)**

The level of interest from our customers has triggered some internal process improvements. For example, we modified our commercial construction application to include electric vehicles. We



have also enhanced the collaboration between the program team and the design team to deliver a seamless customer experience.

#### **Smart Home EV Buildout (EV Existing Home Program)**

The customer's understanding of one-way compared with two-way communication became a challenge. Therefore, TEP streamlined the rebate process in 2021 to a 3 Tier approach focusing on amperage. The Company still finds two-way communication important for our future initiatives. The new 3-Tier rebate process has enhanced our customer experience and allowed us to increase participation.

#### **Residential EV Calculator**

No problems encountered.

#### **Fleet Conversion Planning Tool**

No problems encountered.

#### **New Home EV Readiness (Discontinued as of December 31, 2021)**

No problems encountered.

#### **Employee EV Program**

No problems encountered.

### **5. PROGRAM MODIFICATIONS**

#### **Smart City EV Buildout (EV Commercial Program)**

Since program inception, we made one modification to the program to ensure better alignment with the Company's diversity, equity and inclusion initiatives. At program launch, projects that were located in a disadvantaged community (DAC) received enhanced financial consideration. In July of 2021, we added a qualification to make the chargers open to the public to ensure that DAC projects were made available to the surrounding populations.

#### **Smart Home EV Buildout (EV Existing Home Program)**

In the summer of 2021, TEP modified the program structure to better align with customer expectations and simplify the program requirements and verification process. The program initially provided \$500 for two-way communicating chargers and \$250 for one-way communicating chargers, up to 75% of the installation costs. Now the rebate amount is based on the amperage of the charger in our 3-Tier approach. Rebates have been revised to incent the charger itself.

#### **Residential EV Calculator**

In January 2021, the tool was updated to provide an improved EV selection experience. The customers can more easily find and compare EVs best suited to their lifestyle and preferences through a more intuitive and seamless experience. In addition, customers will be made aware

of the growing number of EV models available in the market, along with their increasing charging ranges and more affordable price points.

#### **Fleet Conversion Planning Tool**

The tool was updated in 2021 to reflect new vehicle offerings and Commission approved Commercial EV Rates.

#### **New Home EV Readiness (Discontinued as of December 31, 2021)**

On June 22, 2021, City of Tucson Mayor and Council approved an amendment to the International Residential Code to require EV charging outlets in all new one- and two-family dwellings. All new homes within the City of Tucson will be required to provide a 40-amp circuit and an outlet near a parking space. Other jurisdictions within TEP service territory indicated they would also adopt the code amendment requiring pre-wire in new one- and two-family dwellings.

#### **Employee EV Program**

No modifications were made.

## **6. BUDGET**

**Covering reporting period of Jan 1<sup>st</sup>, 2021 to December 31<sup>st</sup>, 2021**

Program	Rebates and Incentives	Program Implementation	Program Marketing	Planning and Admin	Measurement, Evaluation, and Research	Program Total Cost
SmartCity EV BuildOut (EV Commercial Program)	\$85,863	\$473,521	41,374	\$0	\$0	\$600,758
EV New Homes	\$2,6000	\$260	\$0	\$0	\$0	\$2,860
EV Existing Homes	\$51,966.50	\$0	\$0	\$0	\$0	\$51,966.50
Residential EV Calculator	No expenses incurred in this period					
Fleet Conversion Planning Tool	No expenses incurred in this period					
Employee EV Program	\$24,000	\$0	\$0	\$0	\$0	\$24,000
Internal Fleet Electrification	Fleet Electrification Update Below					

## **7. STATEWIDE PLAN SPECIFIC METRICS**

Metric Type	Metric	Status
Participation	Public EV charging ports counts, both statewide and within APS and TEP service territories.	Source: <a href="https://afdc.energy.gov">https://afdc.energy.gov</a> Access date: Feb. 2022 Statewide: 2,236 ports TEP: 177 ports



		UNSE: 48 ports
	Customers enrolled in EV rates	366 – See Appendix for breakdown
	Number ports in residential and commercial EV programs.	Residential: 153 Commercial: 291 (completed and contracted ports)
	Individuals and organizations attending and engaging in ongoing TE Collaborative meetings.	Meetings held: November 1, 2021, and February 2, 2022 See attached list of participants
	Number of municipalities that have incorporated TE into their fleet(s)	3
<b>Environmental</b>	Ozone attainment status by county	Santa Cruz and Pima County: PM-10 non-attainment. See attached map in Appendix.
<b>Economic</b>	Geographical distribution of program participants and infrastructure investments by census tract.	See attached map in Appendix

## 8. **FLEET ELECTRIFICATION STATUS REPORT – AS OF MARCH 2022**

Goal:

- Convert 100% Light Duty SUV/Cars to electric (EV) and plug-in hybrid electric (PHEV) vehicles by purchasing 100% EV/PHEV Light Duty/Cars from 2020-2030.
- Convert 100% Light Duty Pickup Truck Fleet to electric (EV) and plug-in hybrid electric (PHEV) vehicles by purchasing 100% EV/PHEV Light Pick-ups from 2024-2030

### **Current status of plug-in hybrid and electric vehicle by type**

Vehicle Class	Fuel Type	Current Total Number	Expressed as a percentage of Total Fleet
Light Duty Vehicle	All Electric	6	13%
Light Duty Vehicle	Plug-in Hybrid Electric	14	30%
Medium Duty Vehicle	All Electric/Hybrid	0	0
Heavy Duty Vehicle	All Electric Hybrid	0	0

\*All other general equipment (forklifts, UTVs and Carts) are not part of the Company's fleet electrification goals. The Company does have electric golf carts and forklifts and will continue to do so as those replacements are viable and financially reasonable.

### **Projected Volume and Costs of All-Electric or Plug-in Hybrid Electric Vehicles by the Next Fleet Electrification Status Update**

Type of Fleet Electrification Expense	Fuel Type	Quantity	Expense Category	Anticipated Operating Expense
Charging Infrastructure	N/A	8 ports	Capital	\$150,000
Fuel	Plug-in Hybrid Electric		Operating	\$3,207
Fuel	Electric		Operating	\$1,560

**Financial Impacts of plugin-hybrid and electric vehicles to rate base**

Given the relative infancy of the Company's fleet electrification strategy, the Company is not able to provide the total financial impacts for its entire fleet.

**UNSE Semi-Annual Progress Report**

As indicated in previous reporting, UNSE is still developing EV programs and currently offers the Employee EV Program. To date, no UNSE employees have participated in the Employee EV program.

## APPENDIX

### 1. Customers enrolled in TEP EV rates.

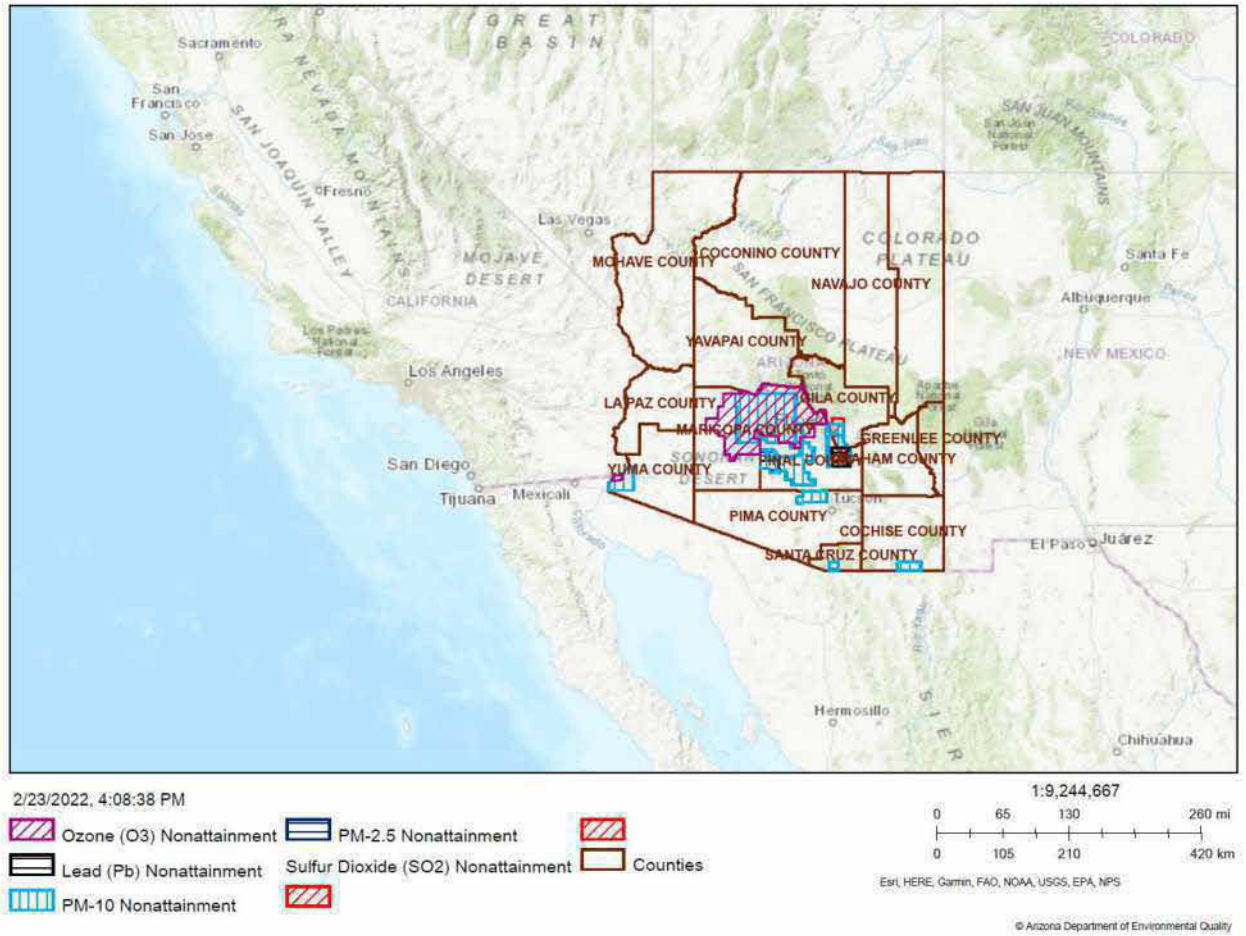
Snapshot Month	GL Company	Customer Class	Rate Description	Rate Code	SA Count - CMS
Dec 2021	Tucson Electric Power	Commercial	Large General Service TOU Fast Charging EV	TILTFCE	2
Dec 2021	Tucson Electric Power	Residential	Residential Demand Super Off-Peak TOU EV	TRDSOTE	41
Dec 2021	Tucson Electric Power	Residential	Residential Demand Super Off-Peak TOU EV RCP 2019	TRDSTER2	6
Dec 2021	Tucson Electric Power	Residential	Residential Demand TOU Electric Vehicle	TRRESDE	29
Dec 2021	Tucson Electric Power	Residential	Residential Lifeline *F TOU - Electric Vehicle	TRRESTEL	2
Dec 2021	Tucson Electric Power	Residential	Residential Service Time of Use - Electric Vehicle - RCP	TRRTER	15
Dec 2021	Tucson Electric Power	Residential	Residential Super Off-Peak TOU EV	TRSOTE	75
Dec 2021	Tucson Electric Power	Residential	Residential Super Off-Peak TOU EV Net Metering	TRSOTEQ	3
Dec 2021	Tucson Electric Power	Residential	Residential Super Off-Peak TOU EV RCP	TRSOTER	9
Dec 2021	Tucson Electric Power	Residential	Residential Super Off-Peak TOU EV RCP 2019	TRSOTER2	15
Dec 2021	Tucson Electric Power	Residential	Residential Super Off-Peak TOU EV RCP 2020	TRSOTER3	9
Dec 2021	Tucson Electric Power	Residential	Residential TOU - Electric Vehicle	TRRESTE	113
Dec 2021	Tucson Electric Power	Residential	Residential TOU - Electric Vehicle - RCP 2019 - TEP	TRRTER2	13
Dec 2021	Tucson Electric Power	Residential	Residential TOU - Electric Vehicle - RCP 2020 - TEP	TRRTER3	8
Dec 2021	Tucson Electric Power	Residential	Residential TOU - Electric Vehicle Net Metering	TRRESTEQ	14
Dec 2021	Tucson Electric Power	Residential	Special Res TOU Electric Vehicle - RCP	TRRSPTER	1
Dec 2021	Tucson Electric Power	Residential	Special Res TOU Electric Vehicle Discount	TRRSPTD	7
Dec 2021	Tucson Electric Power	Residential	Special Residential TOU Electric Vehicle - RCP 2019 - TEP	TRSPTER2	2
Dec 2021	Tucson Electric Power	Residential	Special Residential TOU Electric Vehicle - RCP 2020 - TEP	TRSPTER3	2

2. Individuals and organizations attending and engaging in ongoing TE Collaborative meetings.

<b>Name</b>	<b>Organization</b>
Morgan Bigelow	Lubin & Enoch, PC
Nick Enoch	Lubin & Enoch, PC
Cristina Gallardo-Sanidad	Lubin & Enoch, PC
Mike Barton	HDR
Autumn Johnson	Tierra Strategy Consulting
Renee Samson	Freewire Technologies
Justin Wilson	ChargePoint
CJ Berg	Greenlots
Francesca Wahl	Tesla
Sara Rafason	EVgo
Lindsey Stegall	EVgo
Ram Ambatipudi	EVConnect
Aaron Young	Electrify America
Dan Oshea	ABB
Jared Ballew	ChargePoint
Amanda Myers	Weavegrid
Brendan Endicott	Weavegrid
Phil Jones	ATE
Caryn Potter	SWEEP
Justin Brant	SWEEP
Ellen Zuckerman	SWEEP
Alex Routhier	WRA
Diane Brown	PIRG
Linda Morales	AZ Multi Housing
Allyson Solomon	MPA
Michael Guymon	Tucson Metro Chamber
Cindy Zwick	Wildfire
Aaron Kressig	WRA
Devon Rood	APS
Kerri Carnes	APS
Jason Smith	APS
Tony Perez	SRP
Catherine Obrien	SRP
Koren Manning	City of Tucson
Daniel Bursuck	City of Tucson
Michael Catanzaro	City of Tucson
Donovan Durband	City of Tucson
Fatima Luna	City of Tucson
Sarah Lanius	City of Tucson
Carla Blackwell	Pima County
Lynne Birkinbine	City of Tucson
Jason Angell	Marana
Paul Melcher	Oro Valley
Scott Clark	City of Tucson
Robert Bulechek	
Dan Kimball	

3. Ozone attainment status by county

### Air Quality in Arizona





4. Geographical distribution of TEP EV program participants and infrastructure investments by census tract.

